APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,154	03/30/2004	Lutz Raddatz	Raddatz 1	5417

			EXAMINER
46363	7590	12/14/2006	LE, THI Q

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ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td><td></td></tr>
<tr><td>10/813,154</td><td>RADDATZ, LUTZ</td><td></td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td><td></td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>30 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-9</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>30 March 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>3/30/2004</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   The information disclosure statement (IDS) filed on 3/30/2004 was considered by the

examiner.

Drawings

1.   The drawings are objected to because in **Figure 2, the word "RESIDIUAL" is**

incorrectly spelled. Replace it with "RESIDUAL". Corrected drawing sheets in compliance

with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures appearing

on the immediate prior version of the sheet, even if only one figure is being amended. The figure

or figure number of an amended drawing should not be labeled as "amended." If a drawing

figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and

where necessary, the remaining figures must be renumbered and appropriate changes made to the

brief description of the several views of the drawings for consistency. Additional replacement

sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet

submitted after the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by **Nishimoto et al.**

(US PGPub 2002/0089724 A1).

Consider **claim 1**, Nishimoto et al. clearly show and disclose, a method for measuring

residual chromatic dispersion in an optical transmission system, the method comprising the steps

of: introducing a predetermined amount of chromatic dispersion at the receive end of the system

(read as, the variable dispersion compensator 10 performing wavelength dispersion

compensation; figure 1, paragraph 0052); measuring a bit error rate for the system corresponding

to the predetermined amount of chromatic dispersion (read as, the bit error information

mentoring circuit 12 measures the bit error rate of the received data; paragraph 0054); iterating

the introducing and measuring steps until the bit error rate is a minimum over all measured bit

error rates (read as, the controlling circuit 13 causes the variable dispersion compensator 10 to

change the wavelength dispersion compensation value within a preset range to determine the

optimize values for minimizing the bit error rate; paragraph 0065); wherein the residual

chromatic dispersion in the optical transmission system is represented by a complement of the

predetermined amount of chromatic dispersion at which the minimum bit error rate is achieved

(figure 5 show the graph of wavelength dispersion compensation value versus bit error rate;

paragraph 0066).

Consider **claim 2, and as applied to claim 1 above,** Nishimoto et al. further disclose, the

step of iterating is responsive to the bit error rate in the measuring step and includes selecting a

new predetermined amount of chromatic dispersion for the introducing step (read as, the

controlling circuit 13 received the bit error rate information and causes the variable dispersion

compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 3, and as applied to claim 2 above**, Nishimoto et al. further disclose, the step of selecting further includes controlling selection of the predetermined amount of chromatic dispersion in a manner to produce a minimum bit error rate (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 4, and as applied to claim 1 above**, Nishimoto et al. further disclose, the step of compensating at least some portion of the residual chromatic dispersion in the optical transmission system by selecting a compensating amount from a chromatic dispersion range including 0 ps/nm through and including the predetermined amount of chromatic dispersion at which the minimum bit error rate was achieved (read as, the controlling circuit 13 causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value within a preset range (wherein, the range can be set to any value) to determine the optimize values for minimizing the bit error rate; paragraph 0065) (figure 1 and 5, paragraph 0065-0068).

Consider **claim 5, and as applied to claim 4 above**, Nishimoto et al. further disclose, the step of iterating is responsive to the bit error rate in the measuring step and includes selecting a new predetermined amount of chromatic dispersion for the introducing step (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 6, and as applied to claim 5 above,** Nishimoto et al. further disclose, the

step of selecting further includes controlling selection of the predetermined amount of chromatic

dispersion in a manner to produce a minimum bit error rate (read as, the controlling circuit 13

received the bit error rate information and causes the variable dispersion compensator 10 to

change the wavelength dispersion compensation value in a direction corresponding to

minimizing the bit error rate) (figure 1 and 5 paragraph 0068).

Consider **claim 7,** Nishimoto et al. clearly show and disclose, an apparatus for measuring

residual chromatic dispersion in an optical transmission system, the apparatus comprising: a

dispersion compensator for introducing a predetermined amount of chromatic dispersion at the

receive end of the system (read as, the variable dispersion compensator 10 performing

wavelength dispersion compensation; figure 1, paragraph 0052); a bit error rate, test element for

measuring a bit error rate for the system corresponding to the predetermined amount of

chromatic dispersion (read as, the bit error information mentoring circuit 12 measures the bit

error rate of the received data; figure1, paragraph 0054); a control element coupled to said

compensator and said test element for adjusting said compensator to a new predetermined

amount of chromatic dispersion in order to reduce the bit error rate for the system (read as, a

controlling circuit 13 controlling the wavelength dispersion compensation value based on the bit

error rate information in-order to reduce the bit error rate; figure 1; paragraphs 0056 and 0068);

wherein at least a portion of the residual chromatic dispersion in the optical transmission system

is represented by a complement of the predetermined amount of chromatic dispersion at which

the reduced bit error rate was achieved (figure 5 show the graph of wavelength dispersion

compensation value versus bit error rate; paragraph 0066).

Consider **claim 8, and as applied to claim 7 above**, Nishimoto et al. further disclose, the control element adjusts the compensator to a new predetermined amount of chromatic dispersion in order to minimize the bit error rate for the system, the residual chromatic dispersion in the optical transmission system being represented by a complement of the predetermined amount of chromatic dispersion at which a minimum bit error rate is achieved (read as, the controlling circuit 13 received the bit error rate information and causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value in a direction corresponding to minimizing the bit error rate) (figure 1 and 5 paragraphs 0065-0068).

Consider **claim 9, and as applied to claim 8 above**, Nishimoto et al. further disclose, the control element adjusts the dispersion compensator to a compensating amount of chromatic dispersion selected from a chromatic dispersion range including 0 ps/nm through and including the predetermined amount of chromatic dispersion at which the minimum bit error rate was achieved (read as, the controlling circuit 13 causes the variable dispersion compensator 10 to change the wavelength dispersion compensation value within a preset range (wherein, the range can be set to any value) to determine the optimize values for minimizing the bit error rate; paragraph 0065) (figure 1 and 5, paragraph 0065-0068).

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Penninckx et al.; 6,317,240

b) Ooi et al.; 2002/0015207 A1

c) Sakamoto et al.; 2002/0048062 A1

d) Jones et al.; 2003/0039013 A1

e) Sugihara et al.; 2004/0114936 A1

f) Mikami, Satoshi; 2004/0184813 A1

g) Takahara et al.; 2004/0213578 A1

h) Ishikawa, George; 2005/0185964 A1

5.   Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

>   Commissioner for Patents
>   P.O. Box 1450
>   Alexandria, VA 22313-1450

>   **Hand-delivered responses** should be brought to

>   Customer Service Window
>   Randolph Building
>   401 Dulany Street
>   Alexandria, VA 22314

6.   Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Thi Le whose telephone number is (571) 270-1104. The

Examiner can normally be reached on Monday-Friday from 7:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-

3028.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist/customer service whose telephone number is (571) 272-

2600.

Thi Le

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER